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Masaaki Morioka

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EXAMINER

PILAPITTYA, NALIN B

ART UNIT

PAPER NUMBER

4154

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DELIVERY MODE

10/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/557,836

Applicant(s)

MORIOKA ET AL.

Examiner

NALIN PILAPITIYA

Art Unit

4154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: The meaning of sentence of page 34, lines 10 – 12 is unclear and incomplete. Appropriate correction is required.

Claim Objections

2. Claim 14 is objected to because of the following informalities: the dependency of the claim is incorrect; the preamble should be "The intermediate device according to claim 13" in order to be consistent with claim terminology. For examination on the merits, claim 14 will be assumed to depend of claim 13. Appropriate correction is required.

3. Claim 16 is objected to because of the following informalities: the dependency of the claim is incorrect; the preamble should be "The intermediate device according to claim 15" in order to be consistent with claim terminology. For examination on the merits, claim 16 will be assumed to depend of claim 15. Appropriate correction is required.

4. Claim 17 is objected to because of the following informalities: the dependency of the claim is incorrect; the preamble should be "The intermediate device according to claim 16" in order to be consistent with claim terminology. For examination on the merits, claim 17 will be assumed to depend of claim 16. Appropriate correction is required.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 22 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Functional descriptive material such as computer programs and/or data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized." See MPEP 2106.01(I). **In the instant case, claim 22 does not meet the test above and therefore is rejected as non-statutory subject matter.**

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by **Philipsson** (Pub. No. US 2001/0007815 A1).

Re claim 5, **Philipsson** discloses a management device that registers a communication device to a wireless network in which data communication is performed, the management device comprising:

a readout unit operable to, in registering a communication device to the wireless network; read from a recording medium a piece of initial data for authentication (paragraphs 23, 25);

an authentication unit operable to authenticate the communication device using the piece of initial data (paragraphs 23, 25); and

a communication unit operable to perform data communication with the authenticated communication device via the wireless network (paragraphs 23, 25).

8. Claims 6, 7, 8, 10, 13, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by **Svensson** (Pub. No.: US 2003/0120920 A1).

Re claim 6, **Svensson** discloses a communication device comprising:

receiving unit operable to, when being registered to a wireless network managed by a management device, receive on a predetermined carrier a piece of initial data for authentication from an intermediate device, which holds the piece of initial data received from the management device (paragraphs 6 and 24-25; note the authentication response);

an authentication request unit operable to, based on the piece of initial data, request an authentication from the management device (paragraphs 6 and 25); and

a communication unit operable to, when the authentication is successful, perform data communication with other registered communication devices via the wireless network (paragraph 4), wherein:

an area where the predetermined carrier reaches is narrower in comparison with any carrier for the wireless network (paragraphs 5, 13, 24-25).

Re claim 7, **Svensson** discloses the communication device according to claim 6, wherein: the piece of initial data contains one of a common key and a password for generating the common key, the common key being held by the management device (paragraph 21); and

the authentication request unit request an authentication in a challenge-and-response method using the common key (paragraph 18).

Re claim 8, **Svensson** discloses the communication device according to claim 7, further comprising:

an encryption/decryption unit operable to encrypt data to be sent and decrypt data received by the communication unit, the encryption and decryption being performed based on a common key encryption method using the common key (paragraphs 18 and 19).

Re claim 10, **Svensson** discloses the communication device according to claim 6, wherein: the predetermined carrier is infrared light (paragraph 13).

Re claim 13, **Svensson** discloses an intermediate device comprising:

a receiving unit operable to, in registration of a communication device to a wireless network, receive on a predetermined carrier a piece of initial data from registration device (paragraphs 6, 24-25);

a holding unit operable to hold the piece of initial data (paragraphs 6, 24-25); and

a sending unit operable to send the piece of initial data to the communication device (paragraphs 6, 24-25), using the predetermined carrier, wherein:

an area where the predetermined carrier reaches is narrower in comparison with any carrier for the wireless network (paragraphs 5, 13, 24-25).

Re claim 14, **Svensson** discloses the intermediate device according to claim 13, wherein: different carriers are used in the receiving and the sending of the piece of initial data (paragraphs 13-14).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 4, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kurokawa** (Patent No. 4,607,289) in combination with **Philipsson** (Pub. No. US 2001/0007815 A1).

Re claim 1, **Kurokawa** discloses a management device that registers a communication device to a wireless network in which data communication is performed, the management device comprising:

a transmission unit operable to, in registering the communication device, transmit on a predetermined carrier a piece of initial data for authentication to an intermediate device, which relays the piece of initial data to the communication device (abstract);

an authentication unit operable to authenticate the communication device that has received the piece of initial data from the intermediate device using data identical to the piece of initial data (abstract);

Kurokawa fails to disclose a communication unit operable to perform data communication with the authenticated communication device via the wireless network, wherein:

an area where the predetermined carrier reaches is narrower in comparison with any carrier for the wireless network.

However, **Philipsson** discloses a communication unit operable to perform data communication with the authenticated communication device via the wireless network (paragraph 18, 23), wherein:

an area where the predetermined carrier reaches is narrower in comparison with any carrier for the wireless network (paragraph 7, paragraph 23, and fig. 1A).

Motivation to combine may be gleaned from the prior art contemplated. Therefore, one skilled in the art would have found it obvious from the combined teachings of "**Kurokawa**" and "**Philipsson**" as a whole to produce the invention as claimed with a reasonable expectation of achieving secured communication with in a wireless network.

Re claim 4, **Kurokawa in combination with Philipsson** disclose the management device according to claim 1. **Kurokawa** further discloses wherein the piece of initial data contains a device address of the management device (column 2, lines 53 – 59).

Motivation to combine may be gleaned from the prior art contemplated. Therefore, one skilled in the art would have found it obvious from the combined teachings of "**Kurokawa in combination with Philipsson**" and "**Kurokawa**" as a whole to produce the invention as claimed with a reasonable expectation of achieving secured communication with in a wireless network.

Re claim 20, this integrated circuit claim corresponds to the above management device claim and therefore the analysis for this rejection has already been done.

Re claim 21, the method claim corresponds to the above system claim and therefore the analysis for this rejection has already been done.

11. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Kurokawa** (Patent No. 4,607,289) **in combination with Philipsson** (Pub. No. US

2001/0007815 A1) as applied to claim 1 above, and further in view of **Svensson** (Pub. No.: US 2003/0120920 A1).

Re claim 2, **Kurokawa in combination with Philipsson** disclose the management device according to claim 1, but fails to disclose wherein: the predetermined carrier is infrared light.

However, **Svensson** discloses wherein: the predetermined carrier is infrared light (paragraph 13).

Motivation to combine may be gleaned from the prior art contemplated. Therefore, one skilled in the art would have found it obvious from the combined teachings of "**Kurokawa in combination with Philipsson**" and "**Svensson**" as a whole to produce the invention as claimed with a reasonable expectation of achieving secured communication with in a wireless network.

12. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Kurokawa** (Patent No. 4,607,289) **in combination with Philipsson** (Pub. No. US 2001/0007815 A1) as applied to claim 1 above and further in view of **Yokota et al.** (Patent Number: 6,011,958).

Re claim 3, **Kurokawa in combination with Philipsson** disclose the management device according to claim 1, but fails to disclose wherein: the predetermined carrier is a close-range radiowave of a contactless IC card.

However, **Yokota** discloses wherein: the predetermined carrier is a close-range radiowave of a contactless IC card (column 9, line 23 – 30).

Motivation to combine may be gleaned from the prior art contemplated.

Therefore, one skilled in the art would have found it obvious from the combined teachings of "**Kurokawa in combination with Philipsson**" and "**Yokota**" as a whole to produce the invention as claimed with a reasonable expectation of achieving secured communication with in a wireless network.

13. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Svensson** (Pub. No.: US 2003/0120920 A1) as applied to claim 6 above, and further in view of **Kurokawa** (Patent No. 4,607,289).

Re claim 9, **Svensson** discloses the communication device according to claim 6, but fails to disclose wherein: the piece of initial data contains a device address of the management device; and

the authentication request unit requests an authentication from a device identified by the device address.

However, **Kurokawa** discloses wherein: the piece of initial data contains a device address of the management device (column 2, lines 53 – 59); and

the authentication request unit requests an authentication from a device identified by the device address (column 4, lines 3 – 11).

Motivation to combine may be gleaned from the prior art contemplated.

Therefore, one skilled in the art would have found it obvious from the combined teachings of "**Svensson**" and "**Kurokawa**" as a whole to produce the invention as claimed with a reasonable expectation of achieving secured communication with in a wireless network.

14. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Svensson** (Pub. No.: US 2003/0120920 A1) as applied to claim 6 above and further in view of **Yokota et al.** (Patent Number: 6,011,958).

Re claim 11, **Svensson** discloses the communication device according to claim 6, but fails to disclose wherein: the predetermined carrier is a close-range radiowave of a contactless IC card.

However, **Yokota** discloses wherein: the predetermined carrier is a close-range radiowave of a contactless IC card (column 9, line 23 – 30).

Motivation to combine may be gleaned from the prior art contemplated. Therefore, one skilled in the art would have found it obvious from the combined teachings of “**Svensson**” and “**Yokota**” as a whole to produce the invention as claimed with a reasonable expectation of achieving secured communication with in a wireless network.

15. Claims 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Svensson** (Pub. No.: US 2003/0120920 A1) in view of **Kurokawa** (Patent No. 4,607,289).

Re claim 12, **Svensson** discloses a communication device comprising:
holding unit operable to hold a piece of initial data for authentication by a management device in a wireless network (paragraph 6);
an authentication request unit operable to, based on the held data, request an authentication from the management device (paragraph 6); and

a communication unit operable to, when the authentication is successful, perform data communication via the wireless network with other registered communication devices (paragraph 4).

Svensson fails to disclose the management device obtaining data that is recorded in a recording medium and identical with the piece of initial data.

However, **Kurokawa** discloses, the management device obtaining data that is recorded in a recording medium and identical with the piece of initial data (abstract and column 1, lines 43 – 68).

Motivation to combine may be gleaned from the prior art contemplated. Therefore, one skilled in the art would have found it obvious from the combined teachings of “**Svensson**” and “**Kurokawa**” as a whole to produce the invention as claimed with a reasonable expectation of achieving secured communication with in a wireless network.

Re claim 15, **Svensson** discloses the intermediate device according to claim 14, but fails to disclose further comprising: an erase unit operable to erase the piece of initial data held in the holding unit.

However, **Kurokawa** discloses further comprising: an erase unit operable to erase the piece of initial data held in the holding unit (abstract).

Motivation to combine may be gleaned from the prior art contemplated. Therefore, one skilled in the art would have found it obvious from the combined teachings of “**Svensson**” and “**Kurokawa**” as a whole to produce the invention as claimed with a reasonable expectation of achieving secured communication

with in a wireless network and releasing capacity by deleting old and/or unnecessary data.

16. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Svensson** (Pub. No.: US 2003/0120920 A1) in combination with **Kurokawa** (Patent No. 4,607,289) as applied to claim 15 above and further in view of **Isobe et al.** (Patent No. US 2004/0005893 A1).

Re claim 16, **Svensson in combination with Kurokawa** disclose the intermediate device according to claim 15, but fail to disclose wherein: the erase of the piece of initial data is performed when the piece of sent initial data is received by the communication device. However, **Isobe** further discloses wherein: the erase of the piece of initial data is performed when the piece of sent initial data is received by the communication device (paragraph 58).

Motivation to combine may be gleaned from the prior art contemplated. Therefore, one skilled in the art would have found it obvious from the combined teachings of "**Svensson in combination with Kurokawa**" and "**Isobe**" as a whole to produce the invention as claimed with a reasonable expectation of achieving secured communication with in a wireless network and releasing capacity by deleting old and/or unnecessary data after confirmation..

Re claim 17, **Svensson in combination with Kurokawa** disclose the intermediate device according to claim 16 but fail to disclose wherein: the erase unit confirms, by receiving a notification from the communication device, that the piece of initial data is received by the communication device.

However, **Isobe** discloses wherein: the erase unit confirms, by receiving a notification from the communication device, that the piece of initial data is received by the communication device (paragraph 58).

Motivation to combine may be gleaned from the prior art contemplated. Therefore, one skilled in the art would have found it obvious from the combined teachings of "**Svensson in combination with Kurokawa**" and "**Isobe**" as a whole to produce the invention as claimed with a reasonable expectation of achieving secured communication with in a wireless network and releasing capacity by deleting old and/or unnecessary data after confirmation.

17. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Svensson** (Pub. No.: US 2003/0120920 A1) **in combination with Kurokawa** (Patent No. 4,607,289) and **Isobe** as applied to claim 16 above and further in view of **Lee** (Patent No.: US 6,205,048 B1).

Re claim 18, **Svensson in combination with Kurokawa and Isobe** disclose the intermediate device according to claim 16, but fail to disclose wherein: the holding unit is a Ferroelectric Random Access Memory; and the erase of the piece of initial data is performed by destructive read of the piece of initial data.

However, **Lee** discloses wherein: the holding unit is a Ferroelectric Random Access Memory; and the erase of the piece of initial data is performed by destructive read of the piece of initial data (column 1, lines 31 – 41).

Motivation to combine may be gleaned from the prior art contemplated. Therefore, one skilled in the art would have found it obvious from the combined teachings of “**Svensson in combination with Kurokawa and Isobe**” and “**Lee**” as a whole to produce the invention as claimed with a reasonable expectation of achieving secured communication with in a wireless network and releasing capacity by deleting old and/or unnecessary data.

18. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Svensson** (Pub. No.: US 2003/0120920 A1) as applied to claim 14 above and further in view of **Gatley et al.** (Patent No.: 5,553,312).

Re claim 19, **Svensson** discloses the intermediate device according to claim 14, the device being a handheld type and movable from a first location to a second location (Fig. 1; note the device is portable), but fails to disclose wherein:

the receiving unit receives the piece of initial data at the first location, from which the predetermined carrier reaches the management device; and

the sending unit sends the piece of initial data at the second location, from which the predetermined carrier reaches the communication device.

However, **Gatley** discloses the device being a handheld type and movable from a first location to a second location, wherein:

the receiving unit receives the piece of initial data at the first location, from which the predetermined carrier reaches the management device (column 7, lines 11 – 16); and

the sending unit sends the piece of initial data at the second location, from which the predetermined carrier reaches the communication device (column 7, lines 11 – 16).

Motivation to combine may be gleaned from the prior art contemplated. Therefore, one skilled in the art would have found it obvious from the combined teachings of “**Svensson**” and “**Gatley**” as a whole to produce the invention as claimed with a reasonable expectation of providing a mobile intermediate device between the devices for the benefit of improving security during authentication by moving the intermediate device closer to the device that requires registration into the network.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NALIN PILAPITIYA whose telephone number is (571)270-7122. The examiner can normally be reached on Monday - Friday 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Le can be reached on (571)272-7332. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NALIN PILAPITIYA/
Examiner, Art Unit 4154

/Vu Le/
Supervisory Patent Examiner, Art Unit 4154